A.9 DURATION OF EXCLUSIVE BREASTFEEDING

Recommendation and remarks

RECOMMENDATION A.9 (UPDATED)

Preterm or low-birth-weight infants should be exclusively breastfed until 6 months of age. *(Strong recommendation, very-low-certainty evidence)*

Remarks

- The GDG made strong recommendation in favour of exclusive breastfeeding (EBF) until 6 months of age despite the very-low-certainty evidence because they considered the potential harms of less than 6 months of EBF to outweigh the potential harms of having at least 6 months of EBF.
- In making the decision, the GDG also considered the results of a systematic review of 42 studies (89 638 infants) comparing mother's own milk with infant formula in babies aged 0–6 months *(60)*. This review showed consistent harm from the use of infant formula on a critical outcome (morbidity: necrotizing enterocolitis) in the first 6 months after birth. It also reported no evidence of benefit from infant formula over the same period.
- The GDG also considered that EBF until 6 months of age is the standard of care for preterm and LBW infants across many high-, middle- and low-income countries and is the foundation of many national policies and programmes.
- The GDG also felt that mothers should be encouraged and supported before and after birth to provide their own breast-milk (including colostrum) for their infants.

Background and definitions

WHO defines exclusive breastfeeding (EBF) as feeding no other foods or fluids (not even water) except breast-milk, medicines, vitamins and minerals *(22)*. EBF until 6 months of age is recommended for full-term, normal-birth-weight infants *(22)*. However, preterm and LBW infants are more vulnerable to nutritional deficiencies *(13,56)*. The risks of contamination of complementary foods and early infant formula feeding are also well known *(98)*. In 2011, WHO recommended EBF until 6 months of age for preterm and LBW babies *(19)*, but new studies have been published since that time.

Summary of the evidence

OVERVIEW	A.9 Duration of exclusive breastfeeding (EBF)
PICO	**Population** – Preterm or LBW infants **Intervention** – EBF to < 6 months of age **Comparator** – EBF until 6 months of age **Outcomes** – All-cause mortality, morbidity, growth, neurodevelopment at latest follow-up
Timing, setting, subgroups	**Timing of the intervention** – Birth to 6 months of age **Setting** – Health-care facility or home in any country or setting **Subgroups** • Gestational age at birth (< 32 weeks, ≥ 32 weeks) • Birth weight (< 1.5 kg, ≥ 1.5 kg)

Effectiveness: Comparison – Exclusive breastfeeding for less than six months versus for six months

Sources and characteristics of the evidence

The effectiveness evidence was derived from a systematic review of two RCTs reporting on a total of 307 preterm or LBW infants from two countries (Honduras and India) *(99)*. The trial in Honduras randomized 119 term SGA EBF infants (mean birth weight in the intervention group was 2364 g [SD 137], mean birth weight in the control group was 2327 g [SD 183]) to receive nutrient-rich complementary foods starting from 4 months chronological age. The other study in India randomized 403 infants born before 34 weeks' gestation (mean birth weight in the intervention group was 1479 g [SD 308],

mean birth weight in the control group was 1492 g [SD 344]) to receive nutrient-rich complementary foods starting from 4 months corrected age. Fifty per cent (202/403) of these infants were EBF (104 intervention and 98 control) and 93% (188/202) of those EBF infants had WAZ outcome data (95 intervention and 93 control).

Critical outcomes

For EBF less than six months compared with EBF for six months for preterm or LBW infants, one trial reported morbidity (percentage of days with diarrhoea and/or fever), two trials reported growth outcomes (1 reported weight gain, 1 WAZ, 1 length gain) and one trial reported neurodevelopment (time to achieve motor developmental milestones). No trials reported mortality. (Full details are provided in GRADE Table A.9, in the Web Supplement.)

- **Morbidity:** Very-low-certainty evidence from one trial with 119 participants suggests a decrease in the percentage of days with diarrhoea from 16 to 26 weeks of chronological age (MD -2.6, 95% CI -5.2 to 0.0). Very-low-certainty evidence from one trial with 119 participants suggests little or no effect on the percentage of days with fever from 16 to 26 weeks chronological age (MD -0.7, 95% CI -3.4 to 2.0).
- **Growth:** Very-low-certainty evidence from one trial with 119 participants suggests a decrease in weight gain (in grams) from 4 to 6 months of chronological age (MD -13, 95% CI -143 to 117). Low-certainty evidence from one trial with 188 participants suggests little or no effect on WAZ at 12 months corrected age (MD 0.1, 95% CI -0.2 to 0.4). Very-low-certainty evidence from one trial with 119 participants suggests a decrease in the rate of length gain (in centimetres) from 4 to 6 months of chronological age (MD -0.2, 95% CI -0.6 to 0.2).
- **Neurodevelopment:** Very-low-certainty evidence from one trial with 108 participants suggests little or no effect on motor development milestones at specified chronological ages (in months) (raise head, MD 0.0, 95% CI -0.3 to 0.3; raise chest, MD -0.1, 95% CI -0.7 to 0.5; roll over, MD 0.0, 95% CI -0.7 to 0.7; able to crawl, MD 0.6, 95% CI -0.1 to 1.3; able to sit from lying position, MD 0.6, 95% CI 0.0 to 1.2). Very-low-certainty evidence from one trial with 99 participants suggests an increase in the percentage of infants who can walk by the chronological age of 12 months (RR 1.47, 95% CI 0.69 to 3.13).

Other outcomes

There was a decrease in anaemia (haemoglobin level < 10.5 g/dl) (RR 0.10, 95% CI 0.01 to 0.77, 1 trial, 104 participants) but not in infants who received iron supplements (RR 1.07, 95% CI 0.22 to 5.28; 1 trial, 29 participants).

Subgroup analyses

The effect of gestational age and birth weight could not be assessed as there were insufficient trials for any critical outcome.

Values and acceptability

The systematic review about what matters to families about the care of the preterm or LBW infant (see Table 1.1) reported that families want to be involved in delivering care to infants, including supporting nutrition, and want to take an active role in deciding what interventions are given to infants, including what and how they are fed *(14)*.

There are studies that report the difficulties in providing mother's own milk when the mother and baby return home, including difficulties balancing work commitments, maternity leave, night-time feeding and father/partner support *(14)*. There are also studies that report family concerns with infant formula, including concerns about nutrient composition, water supply, contamination and cost *(64,65)*. Studies also report families valuing having formula available if their circumstances demand it, such as work commitments, maternity leave, night-time feeding, father and partner support *(64,65)*. No specific evidence was located about whether families value EBF for up to 6 months of age for their preterm or LBW baby or whether they find the different durations of EBF more or less acceptable.

Resources required and implementation considerations

Organization of care

Promotion of exclusive breastfeeding for six months should be done at the community and facility level and be integrated within standard national programmes. This should occur throughout the antenatal and postnatal periods and up until the infant reaches 6 months of age.

Infrastructure, equipment and supplies

National or local guidance for infrastructure, equipment and supplies for health-care facilities should be used.

Workforce, training, supervision and monitoring

Health workers at all levels can promote exclusive breastfeeding for six months. Standardized packages are needed for training, supervision and monitoring.

Feasibility and equity

There was no specific evidence on the feasibility and equity of duration of EBF for preterm or LBW infants.

Summary of judgements

Comparison: Exclusive breastfeeding (EBF) for less than six months vs for six months (A.9)	
Justification	• Evidence of small benefits: decrease in percentage of days with diarrhoea *(very-low-certainty evidence)*, increase in neurodevelopment, i.e. percentage of infants who can walk by the age of 12 months *(very-low-certainty evidence)* • Evidence of small harms: decrease in weight gain in grams at 26 weeks *(very-low certainty evidence)* • Evidence of little or no effect on other morbidity (percentage of days with fever), other growth (weight-for-age z score [WAZ], length in centimetres), and other neurodevelopmental milestones (raise head, raise head and chest, roll over, crawl, sit from lying position) *(very-low-certainty evidence)* • No evidence on other critical outcomes
Evidence-to-Decision summary	
Benefits	Benefits of EBF to < 6 months are small
Harms	Harms of EBF to < 6 months are small
Certainty	Very low
Balance	Does not favour EBF to < 6 months, favours EBF to 6 months
Values	Uncertainty or variability about outcomes
Acceptability	Acceptability of EBF to < 6 months varies
Resources	Resources for EBF to < 6 months are low to moderate
Feasibility	Feasibility of EBF to < 6 months varies
Equity	Equity of EBF to < 6 months varies